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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims **1-4, 9-11, 29 and 34** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) in view of Magret et al. ( U.S. Patent Number 6,988,146 B1) in view of Abrol et al (U.S. Patent Publication Number 20020068570 A1.)

Regarding **claims 1 and 29**, Willars et al teaches of a method of handing off a user equipment (UE), which reads on claim “mobile terminal”, from a Serving Network, which reads on claim “first network”, served by a Serving Radio Network Controller (SRNC), which reads on claim “first access device”, to a Target or Drift Network, which reads on claim “second network”, served by a Target/Drift Radio Network Controller (DRNC), which reads on claim “second access device”, comprising the steps of:

- sending an authorization inquiry from the said SRNC to the said DRNC, that includes an IMSI identifying the said UE. See paragraphs [0030 and 0063];
- querying a HLR, which reads on claim “database”, maintained by a said Serving Network associated with the said UE to determine whether the said UE is authorized to be handed off to the said DRNC. See paragraphs [0066-0067];

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- in response to receiving the allowed list, the said DRNC responds by sending a filtered list of DRNC's, which in turn is received by the said SRNC which communicates this information to the UE, which reads on claim "determining that the mobile terminal is authorized to be handed off to the second access device, performing a handoff operation from the first access device to the second access device". See paragraph [0066], wherein the said DRNC then has full control over the connection with the terminal. The Examiner will further explain that in the field of endeavor, when the a handoff occurs the target or drift node take full control of the roaming user after handoff.; and
- in response to determining that the mobile terminal is not authorized to be handed off to the second access device, inhibiting the handoff operation from the first access device to the second access device.

However, Willars fail to clearly disclose wherein querying comprises querying the database on the basis of membership plan associated with a subscriber of the mobile terminal.

Magret teaches in the Abstract and column 3 lines 14-30 wherein a membership query is performed prior to handoff of the subscribed user.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) to include Magret et al. ( U.S. Patent Number 6,988,146 B1) in order to provide an authorization session to occur in order to determined whether or not a subscriber (member) is authorized to be handed off.

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However, the combination fail to clearly teach of a first and second access router.

Abrol teaches in paragraph [0035] wherein a MS leaves a first coverage area RANa and enter the coverage area of a second RANb, authorization is performed with the PSDN2, whereby the MS is allowed to communicate if authorization is permitted.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) to include Magret et al. ( U.S. Patent Number 6,988,146 B1) to further include Abrol et al (U.S. Patent Publication Number 20020068570 A1 in order to provide an authorization session to occur in order to determined whether or not a subscriber (member) is authorized to be handed off.

Regarding **claim 2**, as the combination of Willars , Magret and Abrol et al. are made, the combination according to **claim 1**, Willars et al teaches of method of **claim 1**, wherein step (3) comprises the step of transferring context information from the said SRNC to the DRNC. See paragraph [0068].

Regarding **claims 3 and 34**, as the combination of Willars , Magret and Abrol et al. are made, the combination according to **claims 1 and 29**, Willars discloses wherein steps (1) through (4) are performed without allocating any radio frequency resources of the DRNC to communicate with the UE until after it is determined that the UE is authorized to be handed off to the DRNC. See paragraph [0011].

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Regarding **claim 4**, as the combination of Willars, Magret and Abrol et al. are made, the combination according to **claim 1**, Willars discloses wherein step (2) comprises the step of querying the database on the basis of a list of DRNC's that are authorized to accept handoffs from the UE. See paragraph [0066-0067].

Regarding **claim 9**, as the combination of Willars, Magret and Abrol et al. are made, the combination according to **claim 1**, wherein steps (1) to (4) are conducted between said RNC's that use same access technology. See paragraph [0048].

Regarding **claim 10**, as the combination of Willars, Magret and Abrol et al. are made, the combination according to **claim 1**, Willars et al. teaches in paragraph [0023] wherein between said RNC's, and heterogeneous access technologies are used.

Regarding **claim 11**, as the combination of Willars, Magret and Abrol et al. are made, the combination according to **claim 1**, Willars discloses wherein step (2) comprises the steps of:

- sending the authorization inquiry to a MSC, which reads on claim "administrative server" associated with the said Target or Drift Network. See paragraph [0067];  
and
- sending the authorization inquiry from the said MSC to a said SRNC that accesses the database. See paragraph [0067].

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**Claims 5 and 31** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Magret et al. ( U.S. Patent Number 6,988,146 B1) in view of Abrol et al (U.S. Patent Publication Number 20020068570 A1) in view of Chambert (U.S. Patent Number 5,499,387).

Regarding **claims 5 and 31**, the combination, according to **claims 1 and 29**, fails to disclose wherein the step of querying the database to determine authorization based on a time of day.

Chambert teaches in column 3 lines 54-64, where time monitoring unit is used to prevent handoff to neighboring cells during a certain time.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Magret et al. ( U.S. Patent Number 6,988,146 B1) to include Chambert (U.S. Patent Number 5,499,387 in order restrict handover to certain cells during a time when there are nominally higher capacity.

**2. Claims 7, 8, 30 and 33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Magret et al. ( U.S. Patent Number 6,988,146 B1) in view of Abrol et al (U.S. Patent Publication Number 20020068570 A1) in view of Kennedy, III et al. (U.S. Patent Number 5,966,658).

Regarding **claims 7, 8, 30 and 33**, the combination according to **claims 1 and 29**, the combination fails to disclose wherein the step of querying the database on the basis of dynamic loading conditions and such that authorization is dependent upon dynamic loading conditions.

Kennedy, III et al. teaches in column 5 lines 51-67 wherein the connection of a communication path during handoff is contingent upon the characteristics of transmission time current load, speed, propagation delay, etc.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Magret et al. ( U.S. Patent Number 6,988,146 B1) to include Kennedy, III et al. (U.S. Patent Number 5,966,658) in order to prevent the handoff process from over burdening the said system when candidates for handoff are processed

**3. Claims 12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Magret et al. ( U.S. Patent Number 6,988,146 B1) in view of Abrol et al (U.S. Patent Publication Number 20020068570 A1) in view of Igarashi et al. (U.S. Patent Publication Number 2001/0053694 A1).



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Regarding **claims 12 and 13**, the combination according to **claim 1**, fails to clearly disclose wherein steps (a) and (b) are performed using the DIAMETER protocol and SIP protocol.

Igarashi et al teaches in paragraphs [0094, 0104] wherein the mobile node is able to transport information via various protocols, e.g. SIP and DIAMETER protocol, to facilitate the functions of Authentication, Authorization and Accounting.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Magret et al. ( U.S. Patent Number 6,988,146 B1) to include Igarashi et al. (U.S. Patent Publication Number 2001/0053694 A1) in order to comply with Internet standards of transporting information via IP.

4. **Claims 14-17, 22-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Magret et al. ( U.S. Patent Number 6,988,146 B1) in view of Abrol et al (U.S. Patent Publication Number 20020068570 A1) in view of Funato et al. (U.S. Patent Publication Number 2003/0087646 A1).

Regarding **claim 14**, Willars et al teaches of a method of handing off a user equipment (UE), which reads on claim “mobile terminal”, from a Serving Network, which reads on claim “first network”, served by a Serving Radio Network Controller (SRNC), which reads on claim “first access device”, to a Target or Drift Network, which reads on claim

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“second network”, served by a Target/Drift Radio Network Controller (DRNC), which reads on claim “second access device”, comprising the steps of:

- sending an authorization inquiry from the said SRNC to the said DRNC, that includes a IMSI identifying the said UE. See paragraphs [0030 and 0063];
- querying a HLR, which reads on claim “database”, maintained by a said Serving Network associated with the said UE to determine whether the said UE is authorized to be handed off to the said DRNC. See paragraphs [0066-0067];
- in response to receiving the allowed list, the said DRNC responds by sending a filtered list of DRNC’s, which in turn is received by the said SRNC which communicates this information to the UE, which reads on claim “determining that the mobile terminal is authorized to be handed off to the second access device, performing a handoff operation from the first access device to the second access device”. See paragraph [0066], wherein the said DRNC then has full control over the connection with the terminal. The Examiner will further explain that in the field of endeavor, when the a handoff occurs the target or drift node take full control of the roaming user after handoff; and
- in response to determining that the mobile terminal is not authorized to be handed off to the second access device, inhibiting the handoff operation from the first access device to the second access device.

However, Willars fail to clearly disclose wherein querying comprises querying the database on the basis of membership plan associated with a subscriber of the mobile terminal.

Magret teaches in the Abstract and column 3 lines 14-30 wherein a membership query is performed prior to handoff of the subscribed user.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) to include Magret et al. ( U.S. Patent Number 6,988,146 B1) in order to provide an authorization session to occur in order to determine whether or not a subscriber (member) is authorized to be handed off.

However, the combination fails to clearly disclose wherein the said equipment performing the handoff process is an access router.

Funato et al teaches in paragraphs [0036-0039], wherein the system includes a plurality of access routers (20), used to forward data between networks.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skill in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Magret et al. ( U.S. Patent Number 6,988,146 B1) to include Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) in order to transfer the functionality of mediating the handover processing to the access router which in turn optimizes the system by preventing the use of radio resources for handoffs.

Regarding **claim 15**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) Magret et al. ( U.S. Patent Number 6,988,146 B1, and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the

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combination according to **claim 14**, Willars et al teaches wherein step (3) comprises the step of transferring context information from the said SRNC to the DRNC. See paragraph [0068].

Regarding **claim 16**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) Magret et al. ( U.S. Patent Number 6,988,146 B1 and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, Willars et al teaches wherein steps (1) through (4) are performed without allocating any radio frequency resources of the DRNC to communicate with the UE until after it is determined that the UE is authorized to be handed off to the DRNC. See paragraph [0011].

Regarding **claim 17**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) Magret et al. ( U.S. Patent Number 6,988,146 B1 and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, Willars et al teaches of a method wherein step (2) comprises the step of querying the database on the basis of a list of DRNC's that are authorized to accept handoffs from the UE. See paragraph [0066-0067].

Regarding **claim 22**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) Magret et al. ( U.S. Patent Number 6,988,146 B1 and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the

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combination according to **claim 14**, Funato et al. discloses in paragraph [0037] wherein the access router serves access devices, which reads on claim “mobile terminals”, using Internet Protocol.

Regarding **claim 23**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) Magret et al. ( U.S. Patent Number 6,988,146 B1 and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, Willars et al. teaches in paragraph [0023] wherein between said RNC's, heterogeneous access technologies are used.

Regarding **claim 24**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) Magret et al. ( U.S. Patent Number 6,988,146 B1 and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 23**, Willars et al. teaches in paragraph [0010] wherein the system uses GPRS technology.

Regarding **claim 25**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) Magret et al. ( U.S. Patent Number 6,988,146 B1 and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, Willars et al teaches wherein steps (1) to (4) are conducted between said RNC's that use same access technology. See paragraph [0048].

Regarding **claim 26**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) Magret et al. ( U.S. Patent Number 6,988,146 B1 and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, Willars et al teaches wherein step (2) comprises the step of sending an authorization inquiry to a said Serving Network associated with the said UE. See paragraphs [0066-0067].

5. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Magret et al. ( U.S. Patent Number 6,988,146 B1) in view of Abrol et al (U.S. Patent Publication Number 20020068570 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) in view of Chambert (U.S. Patent Number 5,499,387).

Regarding **claim 18**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) Magret et al. ( U.S. Patent Number 6,988,146 B1 and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, fails to clearly disclose wherein the step of querying the database to determine authorization based on a time of day.

Chambert teaches in column 3 lines 54-64, where time monitoring unit is used to prevent handoff to neighboring cells during a certain time.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Magret et al. ( U.S. Patent Number 6,988,146 B1) in view of Abrol et al (U.S. Patent Publication Number 20020068570 A1) Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) to include Chambert (U.S. Patent Number 5,499,387 in order restrict handover to certain cells during a time when there are nominally higher capacity.

**6.** **Claims 20 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Magret et al. ( U.S. Patent Number 6,988,146 B1) in view of Abrol et al (U.S. Patent Publication Number 20020068570 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) in view of Kennedy, III et al. (U.S. Patent Number 5,966,658).

Regarding **claims 20 and 21**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) Magret et al. ( U.S. Patent Number 6,988,146 B1 and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, fails to disclose wherein the step of querying the database on the basis of dynamic loading conditions and such that authorization is dependent upon dynamic loading conditions.

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Kennedy, III et al. teaches in column 5 lines 51-67 wherein the connection of a communication path during handoff is contingent upon the characteristics of transmission time current load, speed, propagation delay, etc.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) Magret et al. ( U.S. Patent Number 6,988,146 B1 and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) to include Kennedy, III et al. (U.S. Patent Number 5,966,658) in order to prevent the handoff process from over burdening the said system when candidates for handoff are processed

**7.** **Claims 27 and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Magret et al. ( U.S. Patent Number 6,988,146 B1) in view of Abrol et al (U.S. Patent Publication Number 20020068570 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) in view of Igarashi et al. (U.S. Patent Publication Number 2001/0053694 A1).

Regarding **claims 27 and 28**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 26**, fails to



clearly disclose wherein steps (a) and (b) are performed using the DIAMETER protocol and SIP protocol.

Igarashi et al teaches in paragraphs [0094, 0104] wherein the mobile node is able to transport information via various protocols, e.g. SIP and DIAMETER protocol, to facilitate the functions of Authentication, Authorization and Accounting.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Magret et al. ( U.S. Patent Number 6,988,146 B1) in view of Abrol et al (U.S. Patent Publication Number 20020068570 A1) Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) to include Igarashi et al. (U.S. Patent Publication Number 2001/0053694 A1) in order to comply with Internet standards of transporting information via IP.

### ***Response to Arguments***

Applicant's arguments with respect to ***claims 1-34*** have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RANDY PEACHES whose telephone number is (571) 272-7914. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on (571) 272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Randy Peaches/  
Examiner, Art Unit 2617

**/Charles N. Appiah/  
Supervisory Patent Examiner, Art Unit 2617**